

II. MESATLANTIS.

*Monachus.**Manatus.**Inia.**Pontoporia.*

III. INDOPELAGIA.

*Halicore.**Platanista.*

V. MESIRENIA.

*Otaria.**Macrorhinus.*

VI. NOTOPELAGIA.

*Ogmorhinus.**Lobodon.**Leptonychotes.**Ommatophoca.**Otaria.**Neobalæna.**Berardius.*

5. On the Species of *Potamochærus*, the Bush-Pigs of the
Ethiopian Region. By Dr. C. I. FORSYTH MAJOR,
C.M.Z.S.

(Plates XXV. & XXVI.)

[Received March 16, 1897.]

A close examination of eight specimens of the Wild Hog of Madagascar, forming part of my collection from that island, has led me to attempt a review of the complete material available of the genus *Potamochærus*, the results of which I lay before the Society in a very succinct form. I also exhibit two skulls, male and female, of the Madagascar form, and two photographs of the northernmost form, the Abyssinian *P. hassama* (Heugl.).

It may be well at the outset to state the relation which the African *Potamochærus* bears to the other Swine. Leaving out of consideration the more aberrant or otherwise further removed African *Phacochoerus*, the Oriental *Babyrusa*, and the New-World Peccaries (*Dicotyles*), I limit my remarks mainly to the members of the genus *Sus*, with which *Potomochærus* bears closer relationship than with the genera just mentioned.

Several years ago¹ I tried to show that the numerous species of *Sus* which had been established could be reduced to four: *Sus scrofa*; *Sus vittatus*; *Sus verrucosus*, of Java, Borneo, Celebes, &c.; and *Sus barbatus*, of Borneo. In later years numerous excellent papers have been published on the subject by Nehring; besides which not less than 35, partly for the present more or less nominal species, have been introduced by Père Heude², from the

¹ Zool. Anzeiger, 1883, p. 295.

² P.-M. HEUDE, S.J. "Étude sur les Suilliens," Mémoires concernant l'Hist. Nat. de l'Empire Chinois par des Pères de la Compagnie de Jésus. Chang-Hai, 1888-1894.

Asiatic Continent (especially China) and from the Philippines. These additions to our knowledge have rather strengthened my original views, to the effect that we shall in a near future be able to show the complete passage of *Sus scrofa* into *Sus vittatus* by intermediate forms, although one or two of Heude's continental species may for the present rank as such.

The only characters of some importance, upon which the claims of *Potamochoerus* to generic distinction rest are the curious apophyses which Flacourt, speaking of the Malagasy Boar, compared with horns¹. Recent authors call these outgrowths fleshy warts; but having had the opportunity of seeing the animal in the flesh—I am speaking of old males—I must say that Flacourt's term is much more to the point. They recall the osseous horn-like apophyses in some Tertiary Ungulates, as the *Dinocerata* and others. Of course, in the male of *Potamochoerus* the underlying osseous nuclei are formed merely by the convex rugosity on the lateral parts of the nasals and by the outgrowth above the canine, reaching scarcely higher up than the upper contour of the skull. But the overlying "horn" is formed by a very resistant, cylindrical, cartilaginous callosity, part of which is generally cut away on the inner side, whilst the rest shrinks considerably in drying, so that the stuffed skin fails to give an adequate idea of this conformation in the living animal.

Whether this is the beginning of a really osseous horn, or the remnant of such, I cannot say; considering that we have to do with a specialized feature, one might prefer the former supposition. There are some tertiary Swine which by their dentition closely approach the *Potamochoerus*, but this part of their skull is still unknown.

Now this peculiar character exists, as I pointed out, only in the adult male, and it might therefore be doubted whether a sexual character justifies the establishing of a separate genus. Besides, the *Sus verrucosus* of Java, with its numerous varieties in Borneo, Celebes, the Philippines, Amboina, Ceram, and even, as it would seem, in CochinChina², shows the beginning of a similar conformation in the large size of the apophysis above the canine, which is particularly well developed in the Celebes and Amboina form, where we have the beginning also of a rugosity on the nasals. *Sus verrucosus* approaches *Potamochoerus* besides as regards the broad zygomatic arches, which are swollen by underlying sinuses. The claims of *Potamochoerus* to generic distinction are hereby somewhat weakened. On the other hand, *Sus verrucosus* and *Sus barbatus* of Borneo are distinguished from the remaining members of the genus *Sus* by the very characteristic conformation of their lower canines; the same character is met with already in Pliocene Boars of the Siwaliks and in the *Sus* of the Upper Pliocene of the Val d'Arno. So that if the

¹ "Ces sangliers (principalement les masles) ont deux cornes à costez du nez, qui sont comme deux callositez." (Histoire de la grande Isle Madagascar composée par le Sieur De Flacourt: Paris, 1661.)

² Heude, *l. c.* 1894, p. 219.

African Bush-Pigs are to be separated from *Sus*, the Oriental forms just mentioned have as good claims to be equally distinguished by a separate generic denomination. However, the genus-name *Potamochoerus* being in use, and being very convenient for distinguishing the small group of African Pigs in question, it might as well be maintained.

There are, up to the present day, three recognized species of Bush-Pigs or River-Hogs (*Potamochoerus*) in Africa:—

1. The West-African River-Hog, generally known as *Potamochoerus penicillatus* (Schinz), extending from Angola as far north as Senegambia, and, according to Schweinfurth and Emin Pasha, as far east as Moubuttu.

2. The South- and East-African Bush-Pig, which, in this country at least, is generally called *Potamochoerus africanus* (Schreb.), and is supposed to extend as far north as Abyssinia.

3. The Madagascar Wild Hog, called by Grandidier *Potamochoerus edwardsi*.

As regards first the scientific names, I have the following observations to offer:—

Gervais was the first to assert (Hist. N. Mamm. 1855), and after him Nathusius (Vorstudien, 1864), that the *Sus penicillatus* of Schinz (1847) was the long-forgotten *Porcus guineensis* of Marcgrave, Klein, and others (*Sus guineensis*, Briss.; *Sus porcus*, L., Gmel., &c.); whereupon J. E. Gray, in 1868, restored to this beast its original Linnæan specific name, "*Potamochoerus porcus*."

Linnæus (S. N. 10th ed.) identifies his *Sus porcus* as the *Porcus guineensis* of Ray, who himself had stated that his description and name were taken from Marcgrave. Gray (1868 and 1869), quoting Marcgrave, says:—"Marcgrave describes it as having a cyst on the navel, and says that it had been introduced by the negroes, and naturalized in Brazil." From the text of Marcgrave it appears that he does *not* say that his *P. guineensis* has a cyst on the navel, he does *not* say that it had been introduced by the negroes, and he does *not* say that it had been naturalized in Brazil. *Habent sua fata libelli!* The following is the description of *P. guineensis* in the posthumous work of Marcgrave:—

"*Porcus guineensis*, et e Guinea in Brasiliam translatus, figura ut nostrates et ruffi coloris: in hoc autem differt a nostratibus, quod caput habeat non ita elatum: aures autem longas et acutas plane et prolongatis acuminibus, caudam longam usque ad talos propendentem, pilorum expertem. Totum corpus tegitur pilis brevibus ruffis splendentibus, non setis, quibus et in dorso caret, sed tantum versus caudam in dorso et circa collum paulo longiores habet pilos. Plane cicur."¹

Out of evil, however, has come some good, for Gray's more than free translation gave an opportunity to Prof. Reinhardt, of Copenhagen (in a letter addressed to the Secretary of this

¹ GEORGI MARCGRAVI de Liebstad, "Misnici Germani, Historiæ Rerum Naturalium Brasiliæ, Libri Octo": 'Hist. Nat. Brasiliæ,' Lugd.-Bat. et Amstelod. (Elzev.) 1648, p. 230.

Society, and published in the 'Proceedings' for 1869, pp. 56, 57), to put some of the facts under discussion in their true light and to add some interesting particulars. Reinhardt draws attention to the fact that Prince Maurice of Nassau, in whose service Maregrave was, kept animals, brought over from many countries, at his country-seat near Recife (Pernambuco), and that Maregrave describes and sketches also several African Monkeys seen in Brazil (of which it is expressly stated that they came from the Guinea Coast). "He" (Maregrave) "had certainly never thought of saying that his Pig was a domestic animal, but only that in Brazil he had seen such a Pig, brought thither from Africa, and being quite tame—that is to say, doing no harm, but being of a placid, inoffensive nature." Reinhardt further on quotes from a Danish author, Monrad¹, who describes the "Red and Black Boars" on the Gold Coast as being not fierce at all, their hunting being without danger, &c.

I wish to add to Reinhardt's remarks some observations of my own bearing on the subject. No mention is made by Maregrave of the cartilaginous tuberosities above the upper canines in the male, and neither does his otherwise good, though somewhat rough, woodcut show anything of the sort; apparently he had before him a female or a young male (perhaps he had seen only a single specimen); this circumstance, too, goes a great way to show that, in his time at least, the Pig was not reared in Brazil, and it would give a further illustration to his calling it "*plane cicur*."

Schweinfurth², when mentioning the Wild Boar of the Monbuttu, which he considers to be the "*Potamochoerus penicillatus*," says that they are tameable up to a certain extent ("einen gewissen Grad von Zähmbarkeit an den Tag legen"); King Munsa kept a number of them, half wild, in a sort of game-preserve near his residence. I believe the experiences with the West-African *Potamochoerus* in the Zoological Gardens are to the same effect.

The individual, or the individuals, seen by Maregrave were apparently the first brought over to Brazil; but, from what later authors say, we might be inclined to infer that after his time the species was really reared in America. Erxleben (1777), whom Reinhardt quotes, was not the first to say that the Guinea Hog was found in great numbers in Brazil ("ubi hodie copiosissimus"). The same statement had been already made by Hill (1752), Patrick Browne (1756)—both speaking of America generally,—as well as by Pallas (1766) and Buffon (1767); but from what these authors say, it seems not unlikely that a confusion was made with pigs introduced from Asia, an error against which P. L. S. Müller (Vollst. Natursystem) cautioned us as long ago as 1773.

As to the introduction of the Pencilled Hog into England for

¹ H. C. MONRAD. Bidrag til en Skildring af Guinea-kysten og dens Indbyggere og til en Beskrivelse over de danske Colonier paa denne kyst, samlede under mit Ophold i Afrika i Aarene 1805 til 1809 . . . Med en Fortale af C. Molbech: Kjöbenhavn, 1822. 8°.

² Im Herzen von Afrika, ii. pp. 83, 532 (1874).

breeding purposes, Nathusius states ('Racen des Schweines,' 1860, and 'Vorstudien,' 1864) that in English agricultural writings from the beginning to the middle of last century it is stated that besides the Chinese and Romanic Pig, the Red Pig from Guinea has been used in England for crossing. Nathusius quotes no particular author, and I have not been successful in my inquiries in the library of the Royal Agricultural Society, where no books of the last century seem to be kept. The only paragraphs found to the purpose are the following:—John Laurence¹ says: "The *African Hog* is red or sandy in colour, with a small head, long, slender pricked ears, soft and short hair, and a long tail touching the ground. I know not whether this be the same variety used in this country as a cross under the name of the African." David Low is somewhat more positive²:—"Hogs are sometimes introduced from Africa, and mingled with the other races. Those from the coasts of the Atlantic are termed Guinea Pigs, their descendants are of tolerable size and square form, and fattened with sufficient facility."

To conclude on this matter. Whilst the question as to the rearing and crossing of the Guinea Hog in former times, either in America or in England, is still an open one, there is no doubt in my mind that the *Potamochoerus penicillatus* (Schinz) must be called

Potamochoerus porcus (L.).

The South and S.E.-African *Potamochoerus* (*P. africanus*, auctt., *P. larvatus*, Fr. Cuv. part.) must be called

Potamochoerus chæropotamus (Desmoul. 1831);

for "*Sus africanus*, Gmel., 1788," the *Phacochoerus africanus*, has priority over "*Sus africanus*," Schreber, the figure of which (head), without text, was published, according to Sherborn³, in 1791; besides, this figure might as well have been taken from the Madagascar species. The description of *Sus larvatus* of Fr. Cuvier (1817) is mainly based on a skull of the Madagascar Wild Boar, and partly on the drawing by Samuel Daniell⁴, a caricature of *Phacochoerus*, with some admixture of *Potamochoerus*, which could never stand as the type of a species.

1. POTAMOCHÆRUS LARVATUS (F. Cuv.). (Plate XXV. fig. 2 and Plate XXVI. fig. 2.)

This name must, for the reason given above, be reserved for the Malagasy Wild Boar, of which, for the present, I can only acknowledge one species.

Particular interest attaches to the Wild Hog of Madagascar, on

¹ JOHN LAURENCE. A General Treatise on Cattle: London, 1805, p. 510.

² DAVID LOW. The Breeds of the Domestic Animals of the British Islands.—Vol. ii. (London, 1842), "Hog," p. 18.

³ P. Z. S. 1891, p. 587.

⁴ SAMUEL DANIELL. African Scenery and Animals.—No. 21: "The African Hog": London, 1805.

account of its being the only Ungulate of the recent Malagasy fauna and closely related to the species of an African genus; whilst all the other Mammals, with the exception of the Chiroptera, a *Crocidura*, and the *Viverricula*, belong to distinct genera. For this reason it has been supposed by Blanford that the genus *Potamochoerus* did not exist in Africa when Madagascar was connected with that continent, but found its way there at a later time (at the end of the Pliocene or later Pleistocene), when the connection with Africa was severed, so as to prevent most of the present African Mammalia from crossing over; whilst *Potamochoerus*, being a good swimmer, might have been able to cross the Strait. This hypothesis reposes, of course, on two assumptions: first, that the Strait of Mozambique was very much narrower in later Pliocene times than at present; and secondly, on its being taken for granted that the Malagasy *Potamochoerus* is different from all its African congeners. For it is obvious that if the Malagasy Wild Hog is specifically identical with one of the continental species, it must have arrived in the island at a very recent date; and in that case, the most likely supposition would be that for some reason or other it had been carried over by man, as must be supposed to have been the case with regard to *Viverricula malaccensis*.

The question as to the specific distinctness is not in the least settled at present. There has been in the Natural History Museum, for some months, a mounted specimen of a *Potamochoerus* from Nyasaland, which in colour and general outer appearance so closely resembles the Malagasy form that very few zoologists would venture to separate them on account of some slight differences in the respective skins. On the other hand, most of the cranial characters mentioned as distinctive between the Malagasy form and the *P. chæropotamus*¹ are of such little value, being very variable, that no importance can be attached to them. Such are: the position of the mental foramina in the lower jaw, the more or less irregularity in the lower contour of the zygomatic arch, and the conformation of the lateral depression in the region of the lachrymal and the upper part of the maxillary.

Up to the present time, besides the skin of a very young specimen, only one skull of the Malagasy form, that of an adult male, existed in the Natural History Museum. I have brought back from the Upper Forest Region of the island the remains of eight specimens, viz. six skins with their skulls complete, besides a complete skeleton and a separate skull, making in all eight skulls of different ages and both sexes. Two of the skulls, a male (see figs. 1 and 2, p. 365) and a female (Pl. XXV. fig. 2 and Pl. XXVI. fig. 2), are now exhibited. As a result of my comparisons I have to state that there are very constant cranial characters which enable us to distinguish the Madagascar form from the *P. chæropotamus*, with which, on the whole, it has more affinities than with the West-African *P. porcus*.

¹ J. E. GRAY. "On the Madagascar River-hog (*Potamochoerus*) and on the Skulls of the three Species of the Genus" (Ann. & Mag. N. H. xv. 1875, p. 45).

Fig. 1.

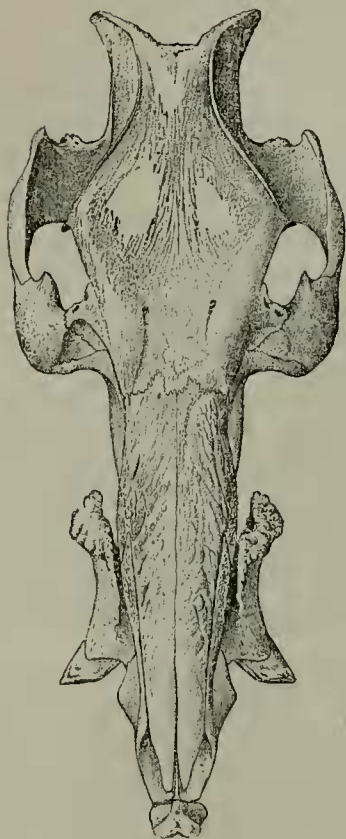
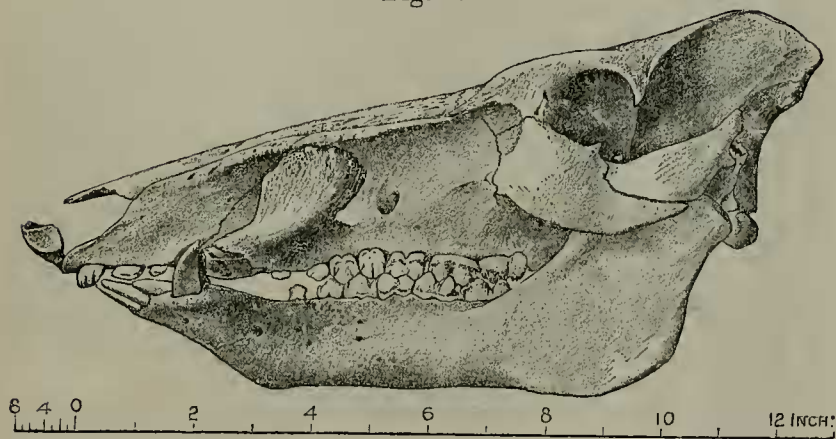
Skull of *Potamochærus larvatus*, ♂, from Madagascar (seen from above).

Fig. 2.

Skull of *Potamochærus larvatus*, ♂, from Madagascar (side view).

With the latter, the Madagascar Hog, which is the smallest of the three, agrees in the more simple pattern of the molar teeth. It approaches *P. chæropotamus*, besides in outer appearance, in the general configuration of the skull, which is narrower and comparatively longer; the upper contour of the profile is straighter in both than in *P. porcus*, the occiput less vertical, the facial region more elongate, and the osseous callosity which rises above and behind the upper canines is always higher. The characters proper to the Malagasy species are the great slenderness of the snout, the nasal region not being flattened nor angular laterally, but rounded off, and the great massiveness and simplicity of the premolars. The lower premolars have an even greater tendency to disappear than in the continental forms, so that in old animals we sometimes meet with only one premolar.

For all these reasons I consider the Malagasy Wild Hog to be a quite distinct form, and I therefore do not see any real reasons for disputing the hypothesis of Blanford. Besides, we have in Madagascar the subfossil *Hippopotamus*, which is very distinct from *H. amphibius*, and the presence of which in the island cannot, in my opinion, possibly be explained in any other way than the case of the *Potamochoærus*, although it has seriously been suggested that the *Hippopotamus* might possibly have been brought over by man.

2. POTAMOCHÆRUS CHÆROPOTAMUS (Desmoul.).

Under the objectionable name of *P. africanus*, *P. chæropotamus* has been stated to range from the Cape through East Africa to British Central Africa and as far north as the Kilima-njaro.

From British Central Africa the Natural History Museum has three skins, one without the skull, the other two from immature individuals; they are of a rufous colour, much resembling, as I have mentioned, the Malagasy Wild Boar, so that from the skins alone I could not venture to separate the two forms.

Two skulls, male and female, from Lake Mweru (B. C. A.), collected by Messrs. A. Sharpe and R. Crawshay¹, agree fairly well with the South-African *P. chæropotamus*, although showing some features of their own, as in the conformation of the apophysis above the canine &c. It is possible that hereafter this rufous Nyasa Hog may be distinguished by a distinct specific name and that the Mweru skulls belong to the same form; for the present the material is insufficient: on the one side, I have only skulls without skins (Mweru), on the other, skins without, or with only immature, skulls (Zomba, &c.). One thing is certain: all these Nyasa Bush-Pigs approach closely the South-African *Potamochoærus chæropotamus*; and I must insist on this point, since some travellers, relying solely on the colour, have united them with the West-African *P. porcus*, with which they have nothing to do.

I cannot, in fact, find a black-skinned *Potamochoærus* mentioned by

¹ See P. Z. S. 1893, p. 723.

any collector or traveller in this part of British Central Africa, and farther north, too, in Ugogo, Burton met with only *red* wild boars. Now it is well known that A. Smith¹, speaking of the Bosch Vark, says that "scarcely any two specimens of this species exhibit the same colours—some are a brownish black variegated with white, and others are almost entirely of a light reddish-brown or rufous tint without the white markings: indeed such are the varieties that it is scarcely possible to say what are the most prevailing colours." As Smith includes the Malagasy Wild Hog under the same name (*Sus larvatus*), it cannot be made out how far his remarks apply to the South-African form alone.

I propose to distinguish these Nyasa Bush-Pigs, with one exception, to be mentioned later on, as *Potamochoerus chæropotamus nyasæ* (see Pl. XXV. fig. 4 and Pl. XXVI. fig. 4).

From Kilima-njaro, the Natural History Museum has a skin, with incomplete skull (lower jaw wanting) (see Pl. XXV. fig. 1 and Pl. XXVI. fig. 3), of a small form of *Potamochoerus* (female), obtained by the Rev. W. Morris. The skin is covered with long and very dark brownish-black bristles. The skull somewhat approaches female skulls of *P. porcus*, and the last upper molar is short as in the latter species; but the posterior nasal region is flattened, as in *P. chæropotamus*, with which last feature agrees as well the more complicated pattern of the molars. Before pronouncing definitely on this interesting form, I should welcome the opportunity of examining an adult male; in the meantime I propose to call it *Potamochoerus chæropotamus dæmonis*².

3. POTAMOCHÆRUS JOHNSTONI, sp. n. (Plate XXV. fig. 3 and Plate XXVI. fig. 1.)

This is a new form from the Ngarawi River, Nkanga, "in the North Nyasa District (N.W. Nyasaland)," based on the skull of a female presented to the Nat. Hist. Museum by Sir Harry Johnston.

The skulls of the females of the various species of *Potamochoerus*, as a rule, closely resemble each other; this particular one having characters of its own, it may be anticipated that the skull of the male and the rest of the animal will present still greater differences. The skull is remarkable for its large size (the animal was scarcely adult), the straight upper contour, and its slenderness. The whole of the nasal region is not at all flattened and with angular borders as in the other species, but rounded off. Molars and premolars large. Premolars $\frac{3}{2}$.

Sir Harry Johnston, to whom Mr. De Winton wrote in my name for further information, kindly informs us that he brought this skull home because, when he first saw the head in his boy's pos-

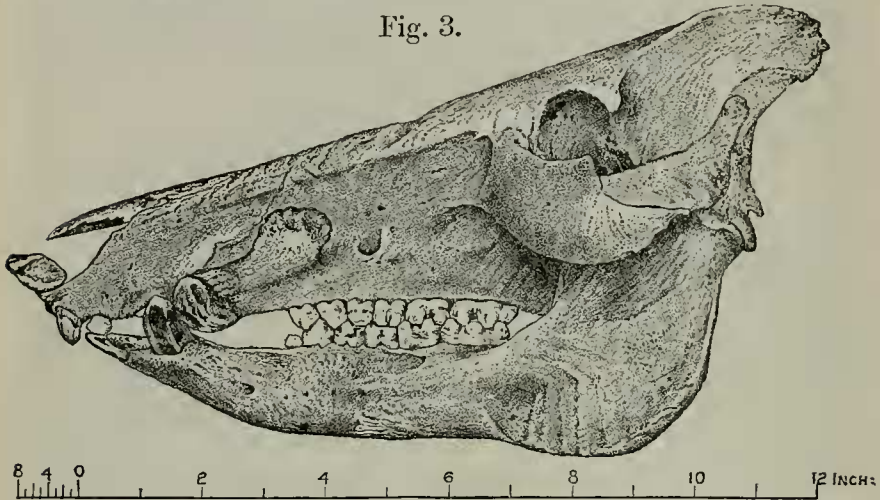
¹ A. SMITH. African Zoology (The South-African Quarterly Journal, vol. ii. p. 178, 1834).

² "Kilima" = mountain; "njaro," a demon, supposed to produce cold (H. H. Johnston).

session, he thought there was something odd about it. He thinks we shall find the new pig elsewhere in B. C. A., "for, for some time, there has been a rumour among the settlers that there are two species of bush-pig, and that one is permanently though faintly white spotted and striped (along the back)."

4. POTAMOCHÆRUS HASSAMA (Heuglin).

Fig. 3.



Skull of *Potamochoerus hassama*, ♂, from Abyssinia (side view).

This is an Abyssinian Bush-Pig. The "Hassama" was first mentioned by Rüppell¹ and later on fully described by Heuglin² under the name of *Nyctochærus hassama*. R. Hartmann was of opinion that Heuglin's *Nyctochærus* was nothing else but the "*Potamochoerus penicillatus*."³ Selater has identified it with "*Potamochoerus africanus*" = *P. chæropotamus*⁴; and in this he is supported by Nehring⁵, who, without entering into particulars, states in the most positive manner ("*mit voller Sicherheit*") that Heuglin's Hassama is "*Potamochoerus larvatus*" = *P. chæropotamus*. If that is so, then there are two species of *Potamochoerus* in Abyssinia; for the photographs of the skull of a male from Abyssinia, from Heuglin's collections (see fig. 3, p. 368, and fig. 4, p. 369)—kindly sent to me by Prof. Eberhard Fraas, Curator of the Stuttgart Nat. Hist.

¹ ED. RÜPPELL. *Reise in Abyssinien*, vol. ii. p. 217 (Frankfurt-a-M., 1840).

² M. TH. V. HEUGLIN. "Beiträge zur Zoologie Afrika's. Ueber einige Säugethiere des Bäschlo-Gebietes": *N. Act. Leopold.* xxx. pt. ii. Nachtrag; 1863, p. 7.—HEUGLIN & FITZINGER. "System. Uebers. d. Säugethiere Nordost-Afrika's, &c.": *Sitzungsber. Akad. d. Wiss., Math.-naturw.* Cl. 54, Bd. i. (Wien, 1866), p. 586.—M. TH. V. HEUGLIN. *Reise in Nordost-Africa*, ii. (Braunschweig, 1877), pp. 97, 276.

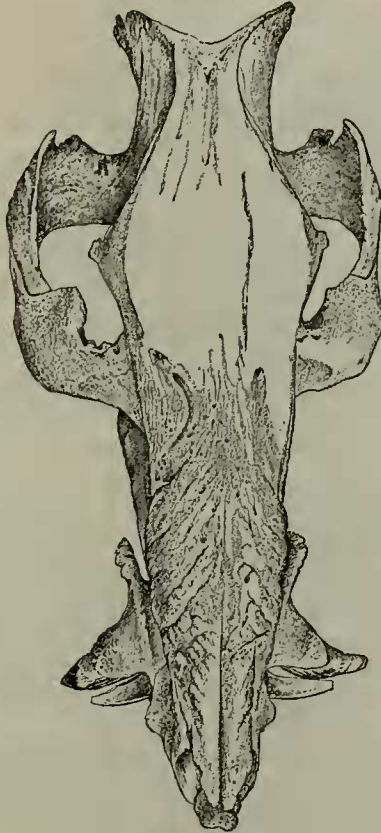
³ R. HARTMANN. "Geogr. Verbr. der im nordöstl. Afrika wild lebenden Säugethiere": *Zeitschr. Berl. Ges. f. Erdkunde*, 1868, iii. pp. 352, 353.

⁴ P. Z. S. 1894, p. 92.

⁵ A. NEHRING. "Ueber d. javan. Wildschwein-Arten, sowie über *Nyctochærus hassama*, Heuglin": *Zool. Garten*, xxxvi. 1895, p. 50.

Museum—show that whilst approaching *P. porcus* in the strong but low apophyses above the canine, and in the breadth of the upper cranial region anterior to the postorbital processes, it is very remarkable and distinct from that of all the other species of *Potamochoærus* in the elongation of the hinder part of the skull backwards from the postorbital processes of the frontals.

Fig. 4.



Skull of *Potamochoærus hassama*, ♂, from Abyssinia (seen from above).

To resume, we have the following species and varieties of the African genus *Potamochoærus* :—

1. *Potamochoærus larvatus* (F. Cuv.). Madagascar.
2. *Potamochoærus chæropotamus* (Desmoul.). S. and S.E. Africa.
P. chæropotamus nyasæ. Nyasaland (B. C. A.).
P. chæropotamus daemonis. Kilima-njaro.
3. *Potamochoærus johnstoni*, sp. n. N.W. Nyasaland.
4. *Potamochoærus hassama* (Heuglin). Abyssinia.
5. *Potamochoærus porcus* (L.). West Africa, from Angola to Senegambia and eastwards to Monbuttu (*teste* Schweinfurth and Emin).

EXPLANATION OF THE PLATES.

PLATE XXV.

Crania of *Potamochærus*, side view. $\frac{1}{2}$ natural size.

- Fig. 1. *Potamochærus chæropotamus demonis*, ♀. B.M. 92.4.24.4.
 2. *P. larvatus*, ♀. From Ampitambè forest (Madagascar).
 3. *P. johnstoni*, ♀. Type. B.M. 91.5.9.5.
 4. *P. chæropotamus nyasæ*, ♂. B.M. 94.3.18.9.

PLATE XXVI.

Crania of *Potamochærus*, upper view. $\frac{1}{2}$ natural size.

- Fig. 1. *Potamochærus johnstoni*, ♀. Type. B.M. 91.5.9.5.
 2. *P. larvatus*, ♀. (Ampitambè, Madagascar.)
 3. *P. chæropotamus demonis*, ♀. B.M. 92.4.24.4.
 4. *P. chæropotamus nyasæ*, ♂. B.M. 94.3.18.9.

April 6, 1897.

W. T. BLANFORD, Esq., F.R.S., Vice-President, in the Chair.

The Secretary read the following report on the additions to the Society's Menagerie during the month of March 1897 :—

The total number of registered additions to the Society's Menagerie during the month of March was 152, of which 44 were by presentation, 2 by birth, 42 by purchase, 30 were received in exchange, and 34 on deposit. The total number of departures during the same period by death and removals was 106.

Amongst the additions attention may be called to two examples of the Indian Pigmy Goose (*Nettopus coromandelianus*), presented by Frank Finn, Esq., B.A., F.Z.S., of Calcutta, on March 22nd. Many attempts have previously been made to introduce this bird into Europe, but without success ; and these are the first specimens that have reached the Society's Gardens alive.

The Secretary exhibited, on behalf of Mr. A. J. Lawford Jones, a curious cinnamon-coloured variety of the Blackbird (*Turdus merula*), which had been captured near Dorking, Surrey.

The following papers were read :—

1. On the Myology of the Terrestrial Carnivora.—Part I. Muscles of the Head, Neck, and Fore-Limb. By B. C. A. WINDLE, M.A., M.D., D.Sc., Professor of Anatomy at Mason College, Birmingham, and F. G. PARSONS, F.R.C.S., F.Z.S., F.L.S., Lecturer on Comparative Anatomy at St. Thomas's Hospital.

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During the last four or five years a considerable number of bodies of carnivorous animals have come into our possession, partly